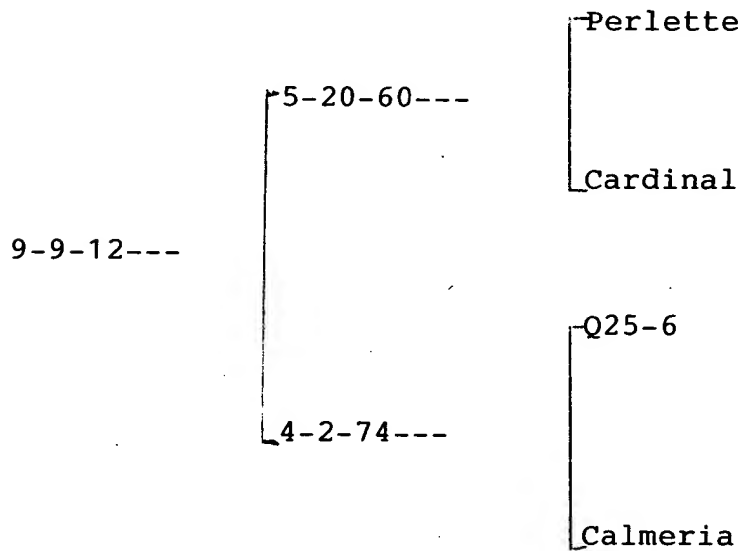


June 20, 2001

The new variety 9-9-12 resulted from a planned cross devised from a long term table grape breeding project of Marko Zaninovich, Inc.; Delano, Ca. In this case, emphasis centered on larger berry size in a later harvest season, similar to Thompson Seedless. The parentage includes several standard varieties; Perlette, Cardinal and Calmeria, all non-patented.

The sequence of parentage is shown below:



PLANT CHARACTERISTICS

The new Muscat table grape '12-76-71' of *vinifera* parentage from the cross

made at McFarland, CA in 1992 and the plant multiplied by cuttings, as well as tested in a trial block by grafting on several rootstocks. These plants proved stable and were typical of the original vine. The invention is a unique seedless Muscat vine setting fruit solely by parthenogenesis.

In the drawings:

Fig. 1 Fruit clusters at harvest.

Fig. 2 Leaf, upper surface.

Fig. 3 Leaf, lower surface.

Vine: Vigorous, but growth compact because of short basal internodes, fruiting area crowded if short pruned. Inflorescences usual on nodes 3 and 5 and require selective removal to insure best form and size of clusters.

Shoot Tip (10"-12"): Shoot tip bronzed with light hairiness, first flat leaf glabrous.

Cane: Large, straight, vigorous; very long internodes, often one cm. in diameter and ten cm. long, surface ridged with continuous dark brown striations; cross-section circular; dormant buds large, flattened, tightly sealed; strong lateral branching. Basal buds very fruitful.

Leaf: Outline spherical, 5-lobed, marginal teeth large, acute. Medium in size, upper surface dark green, unique shape created by inward curvature of basal portion of ribs, causing marked infolding of lobes to almost tubular shape. When leaf is flattened, the wide lobes overlap to close the deep narrow sinuses. Petiole slender, with marked striations of maroon color, often longer than blade, petiolar sinus wide, open U.

Cluster: Primary clusters average 375 gm. The largest berries about 8 gm. each. Total number of berries per cluster is in the range 50 to 70. Harvest time at Delano, California, is when the fruit reaches 18-20° Balling, the acidity is quite low and the Muscat flavor is evident and appreciated by the consumer.

Lateral branches slender and irregular in length and position on the central axis, yet very wiry and resistant to breakage. Flowers and fruit set are mostly concentrated toward the terminal portions of the lateral branches, leaving more exposure in the basal framework and difficulty in identifying a central and pronounced axis. The result is a wide variation in cluster shape and size and failure to repeat a common conical outline.

Berries: Spherical, skin dark red to reddish black, form parthenocarpically without traces of seed development and appear more uniform in size, shape and maturity at harvest time. The dark red coloring of the skin surface is also more consistent and complete because of the spacing of the berries to allow adequate exposure to light. Although the epidermal skin is very thin, it is very resistant to cracking and abrasion. Considering the large size of the berry, it is securely attached to the capstem (pedicel) and at harvest and marketing has a low incidence of shatter.

The resistance of fruit to abrasion and water loss provides a longer period of cold storage as well as extended shelf life without refrigeration. These characteristics are best explained by the unique anatomical development of the berry in which the vascular system of the core replaces and fills the space or cavity normally occupied by the developing seeds. The peripheral vascular strands likewise proliferate and contribute to the very firm structure of the berry flesh, a characteristic not encountered in Muscat varieties.